ADA Section 508 Compliance: Tools and Approaches

ADA: What is it and why me?

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The Americans with Disabilities Act (ADA) is legislation approved in 1986 by the US Congress that assures equal access for all persons with disabilities. Since that time, legislation has been refined and more clearly defined to show that ADA accessibility requirements apply to Internet resources, through Section 508 of The Rehabilitation Act of 1973 enacted in August 1998. Moreover, all local, state and federal agencies that procure, maintain, and/or use Electronic and Information Technology (EIT) must provide equal access for all persons with disabilities. This creates an impact on our publicly funded institutions, curricula and pedagogy that must be accounted for as we increasingly rely on Internet and computer technologies in our educational practices. Unfortunately, it's often through lawsuits that we have had our awareness grow of legislated equity. And, of course, web accessibility benefits others, such as older people with changing abilities due to aging. This year's FLEAT5 conference offered two events that provided an introduction to details of how compliance with ADA legislation can be achieved for online resources in our classes and websites. This article reviews some of the information discussed during those sessions and provides some links for continued learning about how to enable Assistive Technology to work for you.

[Editor's Note: While this information is appropriate for all content providers, the next steps for our profession as language educators need to be identified.]

Access Limitations and Assistive Technologies

The major categories of disability types are: Visual (blindness, low vision, color-blindness); Hearing (deafness); Motor (inability to use a mouse, slow response time, limited fine motor control); and Cognitive (learning disabilities, distractibility, inability to remember or focus on large amounts of information).

All these disability types can be affected by common "WWW Access Hazards" due to the fact that users 1) cannot see graphics because of

visual impairments; 2) cannot hear audio because of hearing impairments; 3) slow Internet connections and modems will not allow for easy download of large files; and/or 4) poorly constructed/organized sites with unclear directions make navigation precarious for ESL individuals and for those with learning disabilities. However, users can compensate for various disabilities by the use of appropriate Assistive Technologies, such as screen readers and magnification devices, close captioning and video descriptions, adaptive keyboards or keyboards overlays, and alternative augmentative communications devices.

Web Design Guidelines

But accessible Web content is not just a hardware solution. Coupled with appropriate use of HTML tags, the organization of your content will make it more accessible. This can be accomplished by the use of written explanations – provide text equivalent for every non-text element (e.g. alt text); employment of simple designs, simple backgrounds with sufficient contrast, and a consistent structure – for ease of navigation through headings, lists, etc.; assuring that text and graphics can be understood without the use of color; summarizing graphs and charts with text; avoiding embedding textual information in graphics; and using Unicode coupled with SVG, and SMIL to aid access to multilingual pages. Some language pages may also need Ruby texts, and, of course, use standard HTML language as much as possible. Encourage non-Web designers to work from compliant 'Web page templates'. Of course, with all these details to keep in mind, the w3 organization has put together tools, checklists, and guidelines to help validate Web sites at http://www.w3.org/wai

Suggested Compliance and Commitment: Is it all up to you?

Providing ADA compliant course content and workstations is not a one-time effort. It requires long-term commitment and accountability from all participants in the content design and offering process. If you are outsourcing content development efforts, keep these suggestions in mind: coordinate with contract vendors to obtain full list of accessible resources; seek out network solutions; secure alternative services when possible; provide appropriately equipped workstations; ensure training and technical support; and promote commitment and accountability.

For the content creator, many of the manufacturers of software we already use recognize that accessibility is critical to the success of their products. The following tools were recommended at FLEAT5: Macromedia's Dreamweaver: Web Design software which contains tools to make accessible templates and more; and Contribute 3: Web page editor that allows you to create templates. While Contribute is not a fully featured Web site construction tool, it does allow editing and adding pages to an existing Web site.

LIFT text transcoder (from UsableNet) is a solution that dynamically generates a text-mode and removes clutter, replaces confusing and disorienting navigation mechanisms, provides global alt tag substitutions and/or overrides failures to describe images, solves inappropriate use of colors and/or poor contrast between content and background allowing end user choices.

Bobby is a Comprehensive Web accessibility tool designed to help expose and repair barriers to accessibility andtests for accessibility compliance at levels 1, 2, and 3.

VISTA –WebCT Enterprise level software is a Learning Management System (LMS) that provides accessibility features such as alt-tag ability.

Acrobat 7.0 now has an accessibility wizard built into it to address the limitations that earlier versions of Portable Document Format (PDF) files had with accessibility.

The Road Ahead

While the road to equitable access and overcoming accessibility issues is not evenly paved yet, attending to the obstacles along the path will help clear the way to enhanced learning opportunity for all. The presenters at FLEAT5 offered these words to encourage us to take this higher road:

> The Web offers many new opportunities to students with disabilities that are unavailable through any other medium. It provides a method for education, communicating with the world, and accessing information. The Internet offers independence, infinite educational opportunities and freedom. Too many Web and LMS sites are not created with accessibility in mind, thus excluding the segment of our student population that would stands to gain the most from their use. By committing to accessibility and providing for accountability, training, and technical assistance, we harness the Web's full potential to the benefit of all our students and we create a true 'learning centered' environment.

But what about the L2?

The tools and methods described above to address ADA concerns are appropriate steps for all content providers to implement when dealing with content in the learner's L1. However, the role of Assistive Technologies for language learning is not yet clear. We see trends at national and state levels regarding the adaptation of standards for language learning which move away from describing language learning via modality frameworks and instead toward outcomes based assets descriptions; however the main focus of most accessibility tools enables learners to compensate dependence on one modality for another. Where does this leave us? How does one develop sound and image matching exercises which test the learner's

ability to connect sound and text, when the learner is deaf or blind? How do we address testing with this environment? Applying accessibility technologies for our materials now has a mandate; the onus is on the language resource centers and labs to develop a set of best practices for implementing AT for our curricula and distinguishing when these practices encourage active learning for all students.

URLs and Resources

Americans with Disabilities Act (ADA) Home Page
http://www.usdoj.gov/crt/ada/adahom1.htm

Section 508 Amendment to the Rehabilitation Act of 1973

http://en.wikipedia.org/wiki/Section_508_Amendment_to_the_Re
habilitation_Act_of_1973

Web Accessibility Training Module developed for the California State University System http://host3.cvc4.org/learningmodules/

Understanding access limitations
http://www.webaim.org/info/asdvideo/

Visual Disability checkers, such as Vischeck and Daltonize

http://www.vischeck.com

Screen Readers & Magnification Device SIMULATION
http://www.webaim.org/simulations/screenreader

Software that allow to create captioning and decoding for the hearing impaired http://www.CCmaker.com

Accessibility validation tools, checklists, and guidelines for web sites http://www.w3.org/wai

Multilingual page help

http://www.w3.org/International

Ruby text help

http://www.w3.org/TR/ruby/#non-visual

Compliant 'web page templates' samples

http://library.csun.edu/template.html and

http://www.csun.edu/~hffll002/mcll_template

EASI (Equal Access to Software and Information)
http://www.isc.rit.edu/~easi/

International Center for Disability Resources on the Internet
http://www.icdri.org/

National Center on Accessible Information Technology in Education (AccessIT)
http://www.washington.edu/accessit/

National Center for Accessible Media (NCAM) resources
http://ncam.wgbh.org/

W3C's Web Accessibility Initiative (WAI)
http://www.w3.org/WAI/

Web Accessibility in Mind (WebAIM)
http://www.webaim.org/

Microsoft and Section 508

http://www.microsoft.com/enable/microsoft/section508.htm

LIFT text transcoder (from UsableNet)

http://www.usablenet.com/frontend/demoform.jsp?prod=tt

Bobby (repair tool)

http://bobby.watchfire.com/bobby/html/en/index.jsp

United Nations enable Project

http://www.un.org/esa/socdev/enable/disacc00.htm